

8500 Series

Subminiature Pushbutton Switches



- Features/Benefits**
 - *Pre-travel or over-travel models available*
 - *Ratings up to 3 AMPS*
 - *Reliable contact design*
 - *RoHS compliant*
- Typical Applications**
 - *Detection*
 - *Telecommunications and networking equipment*
 - *Computers and peripherals*



Specifications

CONTACT RATING: Q contact material (853X Models): 1 AMP @ 120 V AC or 28 V DC; (855X Models): 3 AMPS @ 120 V AC or 28 V DC. See page A-65 for additional ratings.

ELECTRICAL LIFE:
853X MODELS: 250,000 actuations at full load.
855X MODELS: 10,000 actuations at full load.

CONTACT RESISTANCE: Below 30 mΩ typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10⁹Ω min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 65°C.

NOTE: Any models supplied with Q, B or G contact material are RoHS compliant.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Materials

CASE: Glass filled phenolic or diallyl phthalate (DAP) (UL 94V-0).

PLUNGER: Phenolic or glass filled polyester, black standard(UL94V-0).

CAP & FRAME: Nylon, black, standard.

BUSHING: Brass, nickel plated.

CONTACTS: Q contact material: Coin silver, silver plated. See page A-65 for additional contact materials.

TERMINALS: Q contact material: Copper alloy, silver plated. See page A-65 for additional contact materials.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut: Brass, nickel plated; Lockwasher: Steel, bright nickel plated.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages A-63 thru A-66. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all “bottom-wash” PCB cleaning methods.

Switch Function

8531 SPST Off-Mom. 1 Amp

8532 SPST Off-Mom. 1 Amp

8533 SPST On-Mom. 1 Amp

8534 SPST On-Mom. 1 Amp

8551 SPST Off-Mom. 3 Amps

8552 SPST Off-Mom. 3 Amps

Actuator or Plunger

M .150" high

J81 Snap-in with frame

J82 Snap-in with frame for LED

S .210" high

T 15/32 bushing

T1 15/32 bushing with frame (8532 and 8534 only)

Terminations

Z Solder lug

AV* Right angle, PC thru-hole

C PC Thru-hole

Contact Material

Q Silver

B Gold

G Gold over silver

Seal

E Epoxy

D No epoxy seal

Cap or Plunger Color

2 Black

1 White

3 Red

9 Gray

Frame Color

2 Black

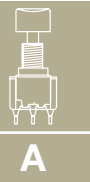
NONE Models without frame

* Available with M or S plunger models, and B contact material only.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

8500 Series Subminiature Pushbutton Switches



Pushbutton
A

SWITCH FUNCTION

NO. POLES	MODEL NO.	RATING	SWITCH FUNCTION		TOTAL TRAVEL	ACTUATION FORCE	SCHEMATIC
			POS. 1	POS. 2			
SP	8531	1 AMP	OFF	MOM.	.095 (2,41) TYP. with overtravel .042 (1,07) TYP.	7.7 oz (220g) TYP.	N.O. with overtravel
	8551	3 AMPS					

SPST

Part number shown: 8531MZQE2

SP	8532	1 AMP	OFF	MOM.	.050 (1,27) TYP.	6 oz (170g) TYP.	N.O.
	8552	3 AMPS					

SPST

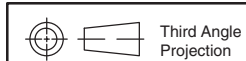
Part number shown: 8532MZQE2

SP	8533	1 AMP	ON	MOM.	.080 (2,03) TYP. with pretravel .057 (1,45) TYP.	11.5 oz (456 g) TYP.	N.C. with pretravel
	8534	1 AMP					

SPST

Part number shown: 8533MZQE2

MOM. = Momentary
All models with all options when ordered with G or Q contact material.

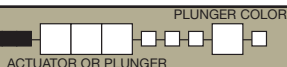


Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

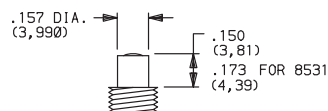


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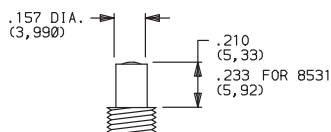
PLUNGER



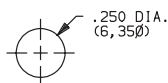
M .150" HIGH PLUNGER



S .210" HIGH PLUNGER



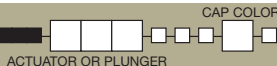
PANEL MOUNTING



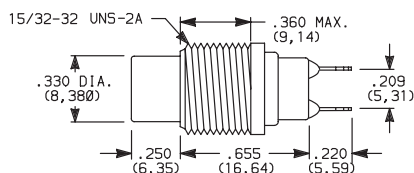
OPTION CODE	PLUNGER COLOR
2	BLACK
3	RED

NOTE: One mounting nut and lockwasher supplied with all actuators (except T actuator: two nuts supplied).

ACTUATOR

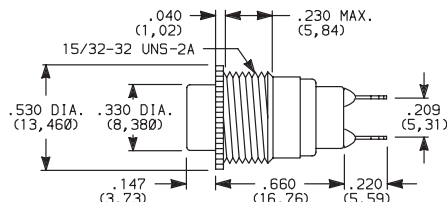


T 15/32 BUSHING



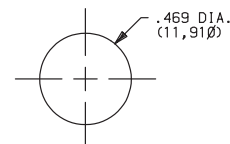
NOTE: No frame color choice required.

T1 15/32 BUSHING WITH FRAME



NOTE: No frame color choice required.
Available with 8532 and 8534 models only.

PANEL MOUNTING



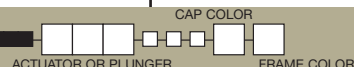
OPTION CODE	CAP COLOR
2	BLACK
1	WHITE
3	RED
9	GRAY

Cap Finish: gloss. Other colors available, consult Customer Service Center.

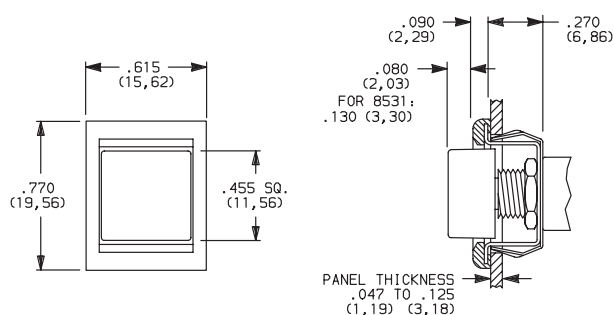
One mounting nut and lockwasher supplied with all actuators (except T actuator: two nuts supplied).

NOTE: Caps available for plunger options, see page A-65.

ACTUATOR—SNAP-IN FRONT MOUNT



J81 SNAP-IN WITH FRAME



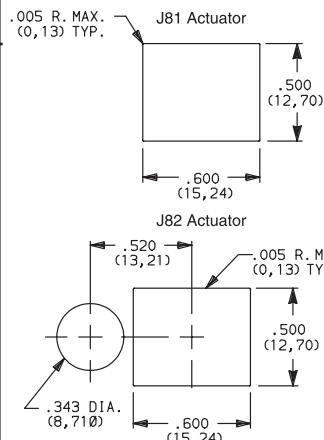
OPTION CODE	CAP AND FRAME COLOR
2	BLACK

Cap and Frame Finish: matte. Other colors available, consult Customer Service Center.

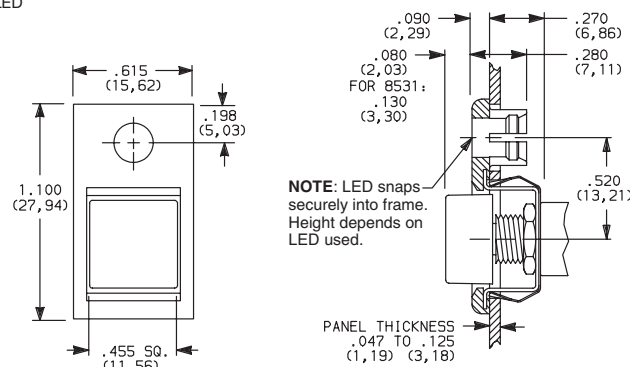
One mounting nut and lockwasher supplied with all actuators.

NOTE: Caps & frames available separately, see pages A-65 and A-66.

PANEL MOUNTING



J82 SNAP-IN WITH FRAME FOR LED



NOTE: LED snaps securely into frame. Height depends on LED used.

LED not included.
For LED information, see page A-66.



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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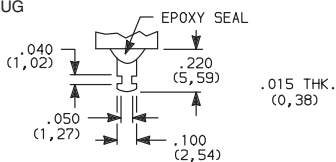
A

Pushbutton

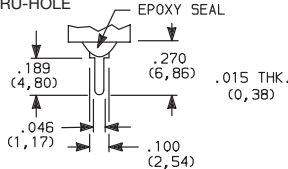
TERMINATIONS



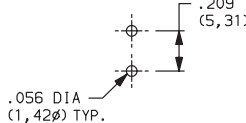
Z SOLDER LUG



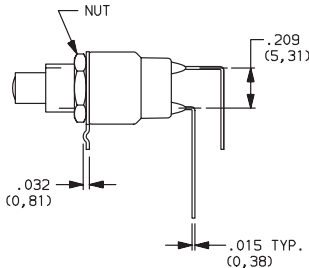
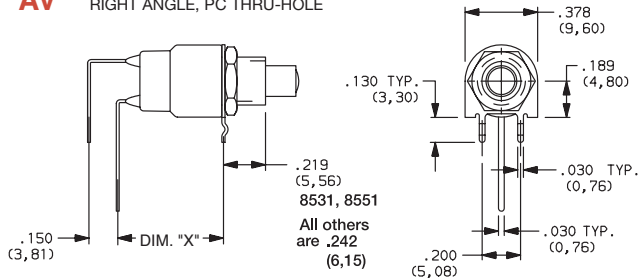
C PC THRU-HOLE



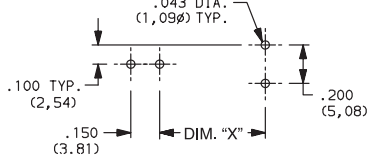
PC MOUNTING



AV RIGHT ANGLE, PC THRU-HOLE



PC MOUNTING



Available with

MODEL NO.	DIM "X"
8531, 8533	0.550
8532, 8534	0.438

NOTE: Available with M or S plunger models, and B contact material only.

CONTACT MATERIAL



OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	TERMINAL PLATING	CONTACT MATERIAL	RATINGS	
B	YES	YES	GOLD ¹	GOLD	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
Q	YES	YES	SILVER ⁴	SILVER ⁵	POWER	853X MODELS: 1 AMP @ 120 V AC OR 28 V DC. 855X MODELS: 3 AMPS @ 120 V AC OR 28 V DC.
G	YES	YES	GOLD OVER SILVER ²	GOLD ³	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 V MAX @20 V AC OR DC MAX. OR 853X MODELS: 1 AMP @ 120 V AC OR 28 V DC. 855X MODELS: 3 AMPS @120 V AC OR 28 V DC.

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

¹ CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

² CONTACTS: Coin silver, with gold plate over nickel plate.

³ TERMINALS: Copper alloy, with gold plate over nickel plate.

⁴ CONTACTS: Coin silver, silver plated.

⁵ TERMINALS: Copper alloy, silver plated.

NOTE: Any models supplied with Q, B or G contact material are RoHS compliant.

All models  with all options when ordered with G or Q contact material.

Q contact material standard with C, Z terminations.

8551 & 8552 available with Q contact material only.

SEAL

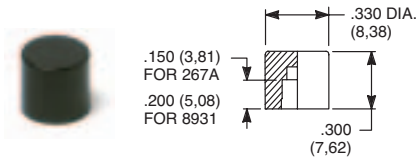


E EPOXY SEAL



REPLACEMENT HARDWARE

Cap for 0.157" dia. plungers



PART NO.

267A01000 WHITE
267A02000 BLACK
267A03000 RED
267A09000 GRAY

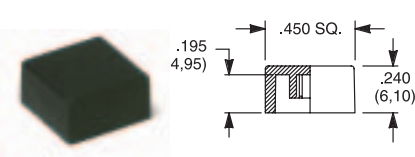
85X2T, 8534T models only
Material: Nylon
Finish: Gloss

PART NO.

893101000 WHITE
893102000 BLACK
893103000 RED
893109000 GRAY

85X1T, 8532T1, 8533T, 8534T1 models only
Material: Nylon
Finish: Gloss

Cap, J80, J81 & J 82 options only



PART NO.

448901000 WHITE
448902000 BLACK
448903000 RED
448909000 GRAY

Material: Nylon
Finish: Gloss or matte

Frame



PART NO.

613302263 BLACK

Material: Nylon
Finish: Matte



Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change



Other colors available, consult Customer Service Center.



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AVAILABLE HARDWARE

Frame



PART NO.

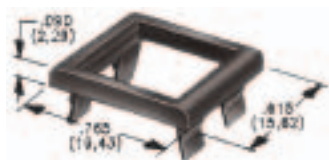
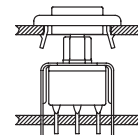
615602263 BLACK

Material: Nylon
Finish: Matte

NOTE: Additional nuts, locking rings and lockwashers available separately, see section "Technical Data and Additional Hardware".
Other colors available, consult Customer Service Center.

Frames snap into panel opening and are independent from switch mounting. Accurate positioning of the PC mounted switch relative to the panel opening is necessary to provide proper clearance between actuator and frame. Available in two basic styles and four panel thicknesses .047-.125 in. Material: Nylon. Finish: Matte.

TYPICAL APPLICATION



.047" (1,19) PANEL THK.

.062" (1,57) PANEL THK.

.090" (2,29) PANEL THK.

.125" (3,18) PANEL THK.

PART NO.

432502263

PART NO.

432602263

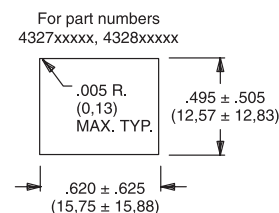
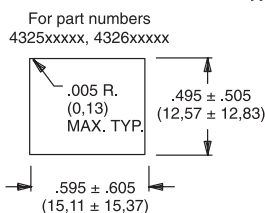
PART NO.

432702263

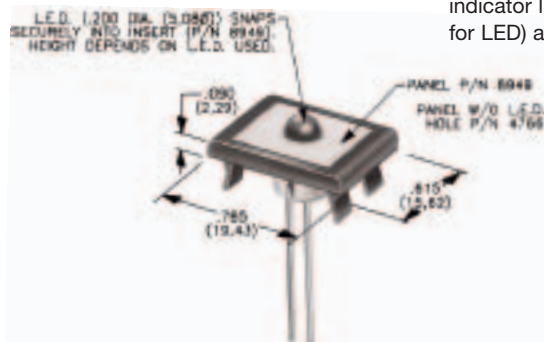
PART NO.

432802263 BLACK

PANEL MOUNTING



Panel Inserts



Above frames (part nos. 432XXXXXX) are also available with insert which accepts LED for indicator light assembly. Order insert separately from frame. Blank insert panel (without hole for LED) also available. **LED not included.**

PANEL INSERT
WITH HOLE FOR LED

PART NO.

894902000

BLANK PANEL INSERT
WITHOUT HOLE FOR LED

PART NO.

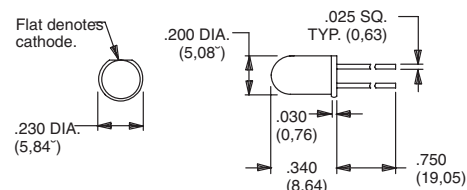
476602000 BLACK

Special colors, custom markings available, consult Customer Service Center.

LED INFORMATION

Process Information: Soldering to LED leads must be completed within 5 seconds at 500°F (260°C) maximum.

LEDs are not supplied with J82 option. LED snaps into switch frame surrounding actuator and is wired externally.



Suggested LED for J82 option.
Dimensions for reference only.



Third Angle
Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

C&K